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Abstract

Country market shares of U.S. non-energy imports have changed considerably since 2002, with varying volatility across three subperiods: pre-crisis (2002–07), crisis (2007–09) and post-crisis (2009–14). In this paper, we analyze market shares for four main trading partners of the United States (Canada, Mexico, China and Japan). We use shift-share analysis to decompose movements in the aggregate market shares into those related to actual shifts in product-specific market shares, versus shifts in the composition of U.S. import demand and the interaction between these two effects. Our analysis shows that separating these effects is important, since shifts in product-specific market shares explain varying amounts of movements in the overall market shares across countries and between time periods. Specifically, we find that two-thirds of Canada's decline in U.S. market share is due to shifts in product-specific market shares and that these losses were relatively stable across subperiods. In contrast, losses associated with a shift in the composition of U.S. import demand were most important during the crisis and have in fact supported Canada's market share since 2009. We also find that almost three-quarters of Canada's total loss in market share was concentrated in two sectors: (i) motor vehicles and parts, and (ii) forestry products and building and packaging materials. Japan's loss in U.S. market share was very similar to Canada's over this period. In contrast, China and Mexico both gained market share between 2002 and 2014. China gained mostly in product-specific market share, while Mexico benefited from favourable shifts in U.S. import demand.

JEL classification: F4, F10, F14
Bank classification: International topics

Résumé

Les parts de marché aux États-Unis des pays exportateurs de produits non énergétiques ont beaucoup évolué depuis 2002, affichant une volatilité variable au cours de trois sous-périodes : avant-crise (2002-2007), crise (2007-2009) et après-crise (2009-2014). Dans cette étude, les auteurs analysent les parts de marché de quatre des principaux partenaires commerciaux des États-Unis (Canada, Mexique, Chine et Japon). Au moyen d'une analyse structurelle résiduelle, ils décomposent les variations des parts de marché globales en trois effets : variations liées aux modifications réelles des parts de marché des divers produits, modifications de la composition de la demande américaine d'importations et interaction entre ces deux effets. Leur analyse montre qu'il est important de séparer ces effets, car les modifications des parts de marché selon les produits expliquent une portion variable des mouvements de l'ensemble des parts de marché entre les pays et entre les périodes. Plus précisément, les auteurs constatent que les deux tiers du recul de la part du marché américain des exportations canadiennes sont attribuables à des modifications des parts de marché des divers produits et que ces pertes étaient relativement stables tout au long des sous-périodes. En revanche, les pertes associées à une modification de la composition de la demande américaine d'importations

ont été les plus importantes durant la crise et ont, dans les faits, appuyé les parts de marché du Canada depuis 2009. Les auteurs observent également que presque les trois quarts de la perte totale de parts de marché du Canada étaient concentrés dans deux secteurs : 1) les véhicules et pièces automobiles et 2) les produits forestiers ainsi que les matériaux de construction et d'emballage. Le recul des parts de marché des exportations japonaises vers les États-Unis a été très similaire à celui enregistré par le Canada au cours de la même période. À l'inverse, les parts de marché de la Chine et du Mexique ont progressé entre 2002 et 2014. La Chine a vu croître principalement les parts de marché de ses divers produits, tandis que le Mexique a profité de modifications favorables de la demande américaine d'importations.

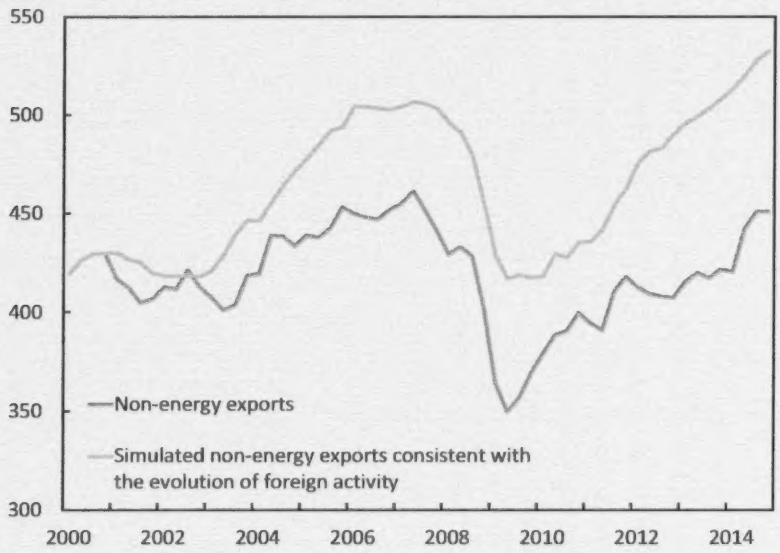
Classification JEL : F4, F10, F14
Classification de la Banque : Questions internationales

I. Introduction

In recent years, Canadian non-energy exports have underperformed relative to the evolution of the Bank of Canada's foreign activity measure (**Chart 1**).[1,2] The gap between non-energy exports and the foreign activity measure has, in turn, dampened business investment and growth of the Canadian economy more generally. Understanding the underlying factors that caused this gap to emerge is paramount to understanding when we should expect to see increased foreign demand translate into stronger exports, improved business confidence and a pickup in investment and employment growth. As a result, the Bank has undertaken a number of analyses in recent years to better understand the evolution of Canadian exports since the Great Recession of 2007–09. This paper represents one contribution to that effort.

Chart 1: Canadian non-energy exports have underperformed relative to the foreign activity measure

Billions of chained 2007 dollars, quarterly data



Sources: Statistics Canada and Bank of Canada calculations

When assessing a country's export performance, it is worth keeping in mind that Country A's exports to Country B can be expressed as the product of three factors: Country B's demand, Country B's propensity to import to meet demand and Country A's share of Country B's imports. A

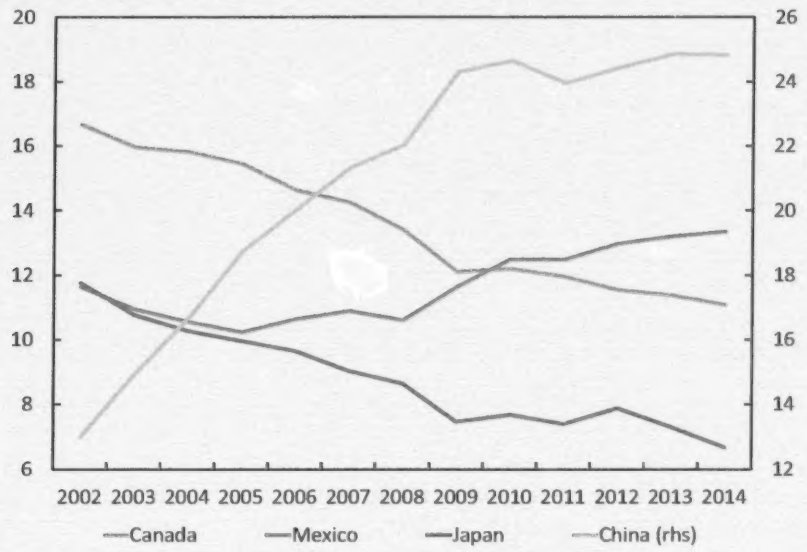
[1] Unlike its non-energy exports, Canada's energy exports have performed well in recent years. This is particularly true for exports of crude oil. Indeed, despite the recent increase in U.S. oil production associated with developments in shale oil extraction, Canadian exports to the United States have steadily increased. This paper therefore focuses on non-energy exports.

[2] See Morel (2012) for more information on the Bank's foreign activity measure.

number of analyses have examined one of these three factors. On the one hand, Binette, de Munnik and Gouin-Bonenfant (2014) provide a thorough examination of how capturing foreign demand at a disaggregated level helps explain the evolution of Canadian exports. Bussière et al. (2013), on the other hand, have shown that accounting for differences in import propensities across components of demand is important in explaining trade dynamics in advanced economies during the Great Recession and the subsequent sluggish recovery. In this paper, we address the third factor affecting Canadian exports, namely the evolution of Canada's share of the U.S. import market before, during and after the crisis, and examine how Canada has fared in this market relative to some other major trading partners of the United States.

Chart 2: The evolution of U.S. non-energy import market shares

Per cent, annual data



Sources: United Nations Comtrade and authors' calculations

Specifically, we examine the evolution of country-specific market shares of U.S. non-energy imports.[3] We focus explicitly on U.S. import shares since the United States is the destination for over 70 per cent of Canadian non-energy exports. Country-specific market shares of U.S. non-energy imports have changed significantly since 2002. For example, Canada and Japan have seen their shares of this non-energy import market decline by 5.6 and 5.1 percentage points, respectively, while China has seen an increase of almost 12 percentage points over the same period (**Chart 2**). However, examining movements in aggregate market shares can hide the true nature of the underlying shift by obscuring changes caused by actual shifts in product-specific

[3] Throughout this paper, we focus only on non-energy market shares of goods and exclude services because of data limitations. In 2014, goods accounted for 81 per cent of total non-energy exports.

market shares versus shifts in the composition of U.S. import demand and the interaction between these two effects.[4]

This paper uses a shift-share analysis with product-specific market shares at the 6-digit Harmonized System (HS) code level to differentiate between these specific effects. Our analysis suggests that this decomposition can be extremely important, particularly when attempting to explain movements in the market share over shorter time periods. Moreover, we can further extend this analysis to export sectors and subcategories of non-energy imports to provide a more comprehensive picture of Canada's export performance in the U.S. market.

The remainder of the paper is organized as follows. In the next section, we describe the shift-share methodology used. We then apply the methodology to the market shares of some main trading partners of the United States, including Canada, highlighting key similarities and differences across countries. Finally, we examine the sectors that have driven the decline in market share and discuss potential implications for Canada's export prospects.

[4] We focus only on import market share and not on U.S. domestic market share (including U.S. domestic production), which could also affect Canadian exports. The competitiveness effect is therefore relative to other countries exporting to the United States and not relative to U.S. firms.

II. Methodology

1. *Data*

In the analysis that follows, we use United Nations Comtrade data at the 6-digit HS code level using HS 2002 classification.[5] At the 6-digit level, U.S. imports of non-energy exports can be broken down into approximately 5,200 differentiated goods. We believe that using this finer level of detail is important, particularly when discussing or assessing relative competitiveness. As noted in de Munnik, Jacob and Sze (2012), shift-share analysis (including constant market share analysis) results are sensitive to the level of disaggregation, with finer levels of disaggregation attributing larger portions of export movements to changes in the composition of demand and less to competitiveness.[6]

2. *Decomposition framework*

We use the following formula in a standard shift-share analysis to decompose movements in country *c*'s market share of U.S. non-energy imports:

$$\Delta MS_t^c = \underbrace{\sum_i sh_{t-1}^k * \Delta MS_t^{c,k}}_{\text{Changes in product-specific market share (competitiveness)}} + \underbrace{\sum_i \Delta sh_t^k * MS_{t-1}^{c,k}}_{\text{Shifts in the composition of U.S. demand (demand)}} + \underbrace{\sum_i \Delta sh_t^k * \Delta MS_t^{c,k}}_{\text{Interaction term}}$$

where sh_t^k = the share of good *k* in total U.S. non-energy imports and
$MS_t^{c,k}$ = the market share of country *c* in U.S. imports of good *k*.

As illustrated, the change in the market share of country *c* can be decomposed into three effects: changes in product-specific market shares, shifts in the composition of U.S. demand and the interaction between the two effects (also referred to as competitiveness, demand and interaction, respectively). The interaction term captures the added negative effect of losing (gaining) market share in an expanding (shrinking) market or the added positive effect of gaining (losing) market share in an expanding (shrinking) market. We believe this type of decomposition is valuable since isolating the movements that are solely related to changes in product-specific market share will be important for discussing losses related to competitiveness effects and might help explain some of the deviations of non-energy exports from the Bank's foreign activity measure. Furthermore, this methodology allows us to decompose the three effects into export sectors and subcategories of

[5] To perform the shift-share analysis, we need to use the same classification of goods for the entire period studied. We choose HS 2002 since it is a recent classification that includes pre-crisis data.

[6] Our results are not directly comparable with the analysis in de Munnik, Jacob and Sze (2012) since they use data based on the SITC Revision 2 product classification at the 2-digit level, which includes only 68 different products.

non-energy imports, which helps us identify where Canada has suffered the largest losses in market share.

Our methodology differs from the standard constant market share analysis (CMSA) used to decompose market shares into competitiveness and structural factors. While CMSA is a useful methodology for comparing trade flows of one country with those of a number of different countries and product categories, we believe it is less well suited for the type of country-to-country analysis conducted in this paper. CMSA uses relative growth rates to proxy shifts in market shares, but if one is really interested in analyzing these shifts between two countries, it seems sensible to focus directly on the actual market shares rather than a proxy. Moreover, if we apply CMSA, it would attribute 89 per cent of Canada's overall loss of U.S. market share to competitiveness, while our shift-share analysis suggests it should account for only 67 per cent. CMSA appears to be conflating competitiveness and the interaction between competitiveness and shifts in U.S. demand.

Lastly, the shift-share analysis methodology has been used extensively for labour markets, particularly for examining movements in the aggregate labour force participation rate that are related to shifts in the population resulting from the aging baby boomers and changes in participation rates based on age and/or gender. Because changes in the structure of the population occur gradually over time, the interaction term is typically quite small and is thus often ignored or simply split evenly across the other two factors when examining labour markets (e.g., the Blinder-Oaxaca decomposition). However, the structure of U.S. import demand does not evolve as smoothly as shifts in the population. In fact, our analysis will show that U.S. import demand can shift abruptly over short time periods. For example, in 2009, the loss in Canadian market share solely reflected a decline in demand and a negative contribution from the interaction term, since Canadian exporters had gained market share in rapidly shrinking sectors. In this case, it would be misleading to attribute this decline to competitiveness. Therefore, we choose to report the interaction term on its own and to discuss potential interpretations.

III. Results

1. Decomposing the aggregate market share

(i) Canada

Canada's market share of U.S. non-energy imports fell from 16.7 per cent in 2002 to 11.1 per cent in 2014 (**Chart 2**). Declines in competitiveness explain 3.7 percentage points of Canada's 5.6-percentage-point loss in market share (**Table 1**). The remaining loss was split evenly between unfavourable shifts in the composition of U.S. demand and the interaction between Canada losing (gaining) market share in markets of growing (shrinking) importance.

Table 1: Decomposition of the change in the U.S. non-energy import market share—Canada (percentage points)

	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*
2002–07	-2.4 | *-0.5*	-1.7 | *-0.3*	-0.2 | *-0.0*	-0.5 | *-0.1*
2007–09	-2.1 | *-1.1*	-0.5 | *-0.2*	-1.3 | *-0.7*	-0.3 | *-0.2*
2009–14	-1.0 | *-0.2*	-1.5 | *-0.3*	0.7 | *0.1*	-0.2 | *-0.0*
2002–14	**-5.6 | *-0.5***	**-3.7 | *-0.3***	**-0.9 | *-0.1***	**-1.0 | *-0.1***

Note: Numbers may not add to total because of rounding.

Canada's loss in non-energy import market share primarily took place during the pre-crisis (2002 to 2007) and crisis (2007 to 2009) periods, with the average annual decline picking up during the crisis (**Chart 3**). The larger average annual loss during the crisis reflected negative shifts in the composition of U.S. import demand, which subsequently reversed and have supported Canada's non-energy import market share since 2009. Losses related to the interaction term also increased during the crisis before moderating post-crisis. Losses due to competitiveness, however, remained relatively stable over the pre-crisis, crisis and post-crisis periods. In other words, Canada's decline in competitiveness has been fairly consistent since 2002, while declines due to demand shifts and the interaction effect have fluctuated across time periods.

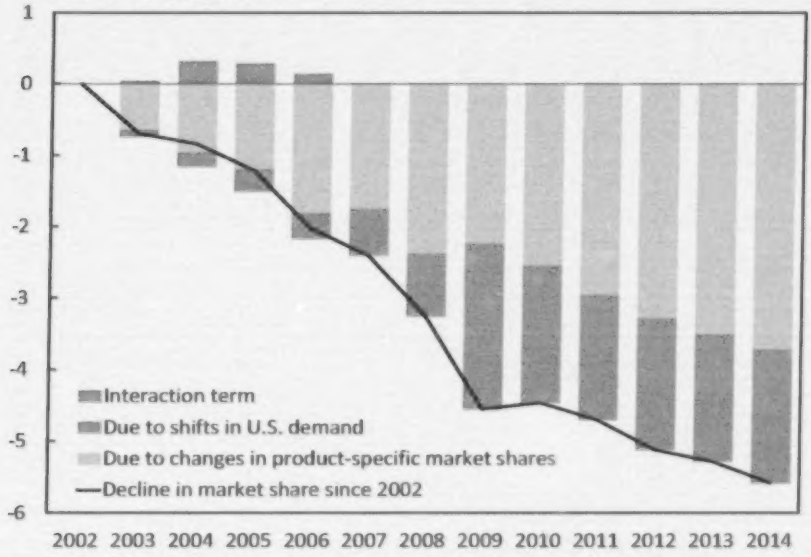
Interestingly, Canada is the only country of the four examined where the interaction term pulled down the non-energy import market share between 2002 and 2014.[7] Potential explanations for

[7] Of the negative interaction terms, 54 per cent are in a situation where Canada lost market share in a growing market; they represent 55 per cent of the negative value of the interaction term.

this observation are that Canadian firms are not marginal producers in the U.S. market[8] or that they are focused primarily on their core business activities (i.e., building market share) and are less active in trying to expand into growing markets.

Chart 3: Cumulative change in Canada's share in the U.S. non-energy import market

Percentage points, annual data



Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

(ii) Other major trading partners

In contrast to Canada's experience, the story is more mixed for the other major U.S. trading partners.[9]

China's share of the U.S. non-energy import market increased significantly after 2002, rising from 13 per cent to 24.8 per cent by 2014 (**Chart 2**). Improvements in competitiveness explain all of China's increase in market share with unfavourable demand shifts being almost entirely offset by a positive interaction term (**Table 2**).

China's gains in U.S. import market share were largest during the pre-crisis and crisis periods and rose by a much smaller amount post-crisis. The slowdown is particularly striking for

[8] If Canadian firms are not marginal producers, it would imply that they are not the first ones to be cut out of a market when it is shrinking, but they are also not the ones to be added when a market is expanding.

[9] We report results for the four countries with the largest share of U.S. imports, including Canada. Similar analyses were performed for a few other countries but are not reported in this paper since the changes in market share were small and did not impact the results.

competitiveness, where the contributions were halved between each period. Interestingly, of the four countries examined, China is the only one where demand shifts supported its market share during the crisis period. This reflects, in part, the steep decline in U.S. motor vehicle imports during the crisis that disproportionately affected exports from Canada, Mexico and Japan.

Table 2: Decomposition of the change in the U.S. non-energy import market share—China (percentage points)

	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*
2002–07	8.3 | *1.7*	8.3 | *1.7*	-1.6 | *-0.3*	1.6 | *0.3*
2007–09	3.0 | *1.5*	1.6 | *0.8*	1.0 | *0.5*	0.3 | *0.1*
2009–14	0.5 | *0.1*	1.9 | *0.4*	-1.9 | *-0.4*	0.5 | *0.1*
2002–14	**11.8 | *1.0***	**11.9 | *1.0***	**-2.4 | *-0.2***	**2.3 | *0.2***

Note: Numbers may not add to total because of rounding.

Mexico increased its share of the U.S. non-energy import market by 1.7 percentage points between 2002 and 2014, despite losing competitiveness over this period (**Table 3**). The increase in Mexico's market share was almost entirely due to favourable demand shifts, with the small amount removed by a loss in competitiveness being offset by the interaction effect.

Table 3: Decomposition of the change in the U.S. non-energy import market share—Mexico (percentage points)

	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*
2002–07	-0.7 | *-0.1*	-1.2 | *-0.2*	0.4 | *0.1*	0.1 | *0.0*
2007–09	0.8 | *0.4*	0.7 | *0.4*	-0.1 | *0.0*	0.1 | *0.1*
2009–14	1.7 | *0.3*	0.3 | *0.1*	1.2 | *0.2*	0.2 | *0.0*
2002–14	**1.7 | *0.1***	**-0.2 | *0.0***	**1.5 | *0.1***	**0.4 | *0.0***

Note: Numbers may not add to total because of rounding.

Across subperiods, the dynamics of the market share drivers are also quite different than those for Canada. All of Mexico's losses related to competitiveness occurred pre-crisis, with gains in product-specific market share observed subsequently. Shifts in demand supported Mexico's market share in the pre- and post-crisis periods but were a small drag during the crisis. Favourable demand shifts were particularly important post-crisis in boosting Mexico's non-energy import market share. When combined with small gains from competitiveness and the interaction term,

these demand shifts led to considerable gains in U.S. market share since 2009. It is interesting to note that while China's market share gains took place early on (pre-crisis), Mexico's gains have taken place more recently (post-crisis).

Of the major U.S. trading partners examined, Japan's performance is most similar to that of Canada (although the drivers are somewhat different). Japan lost 5.1 percentage points of U.S. non-energy import market share between 2002 and 2014, most of which was attributable to competitiveness (**Table 4**). Similar to China, a negative contribution from demand shifts was largely offset by the interaction effect.

Table 4: Decomposition of the change in the non-energy market share—Japan (percentage points)

	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*	Δ | *Δ/year*
2002–07	-2.7 | *-0.5*	-2.7 | *-0.5*	-0.7 | *-0.1*	0.7 | *0.1*
2007–09	-1.6 | *-0.8*	-0.5 | *-0.3*	-1.0 | *-0.5*	0.0 | *0.0*
2009–14	-0.8 | *-0.2*	-1.6 | *-0.3*	0.7 | *0.1*	0.1 | *0.0*
2002–14	**-5.1 | *-0.4***	**-4.9 | *-0.4***	**-1.0 | *-0.1***	**0.7 | *0.1***

Note: Numbers may not add to total because of rounding.

Japan's market share losses primarily took place in the pre-crisis and crisis periods. The better performance post-crisis reflects favourable shifts in demand, especially for motor vehicles, machinery and equipment, and aircraft, which have supported Japan's market share and partially offset continued negative contributions from competitiveness. In fact, the negative contribution from competitiveness effects diminished during the crisis and in the years that followed, but these losses have returned to pre-crisis levels over the past two years.

2. Sectoral contributions to the change in market share

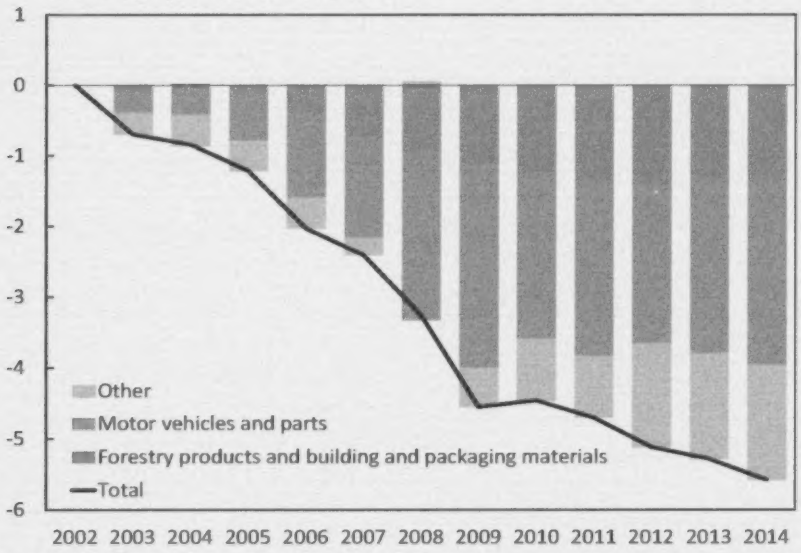
Another advantage of the shift-share methodology is that it allows us to decompose the changes in aggregate market share into the contributions from different export sectors and subcategories, in particular categories consistent with those presented in Binette, de Munnik and Gouin-Bonenfant (2014).[10] In this section, we present the contributions to Canada's loss in market share

[10] For all four countries examined, we have decomposed the change in non-energy import market share into 27 categories similar to those examined in Binette, de Munnik and Gouin-Bonenfant (2014). The results are presented in the appendix (tables A1 to A4), while summary statistics for the 27 categories are provided in tables A5 and A6. These categories are based on the classifications of the North American Product Classification System, which were then

according to sector. Our analysis shows that the majority of the decline in Canada's market share can be explained by two sectors: (i) motor vehicles and parts, and (ii) forestry products and building and packaging materials. As a result, a detailed analysis of these two sectors is provided, as well as cross-country comparisons with the other major U.S. trading partners.

Chart 4: Cumulative change in non-energy import market share decomposed by sector

Percentage points, annual data



Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

Overall, despite making up only 33 per cent of Canada's non-energy exports, these two sectors accounted for 71 per cent (4 percentage points) of Canada's loss in market share from 2002 to 2014 (**Chart 4**). Specifically, the motor vehicles and parts and the forestry products and building and packaging materials sectors removed 2.6 and 1.4 percentage points from Canada's total non-energy import market share, respectively. The remaining 1.6-percentage-point decline is associated with the sector we refer to as "other," which includes the cumulative impact from the remaining 22 of 27 export categories presented in the appendix (see tables A1 to A6).

Not only were the losses in market share disproportionately weighted toward motor vehicles and parts and forestry products and building and packaging materials, but the factors driving the declines were also quite different. On the one hand, losses in product-specific market share were fairly broad based, explaining a little over 40 per cent of the loss in market share in motor vehicles

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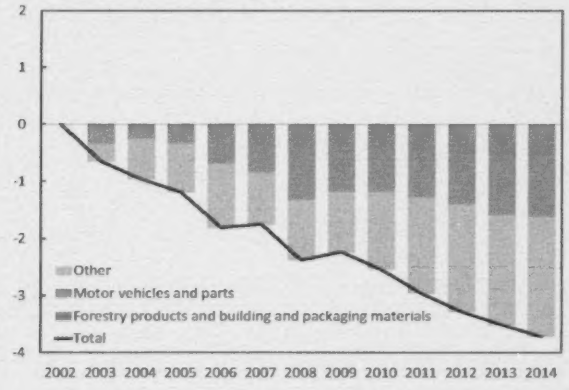
reconciled with the HS 2002 classification using a mapping provided by Statistics Canada. Unlike Binette, de Munnik and Gouin-Bonenfant (2014), we exclude services because of data limitations and combine passenger cars and trucks with medium and heavy trucks because of definitional limitations.

and parts and forestry products and building and packaging materials, while explaining all of the losses in the "other" sector (**Chart 5**). On the other hand, unfavourable shifts in U.S. demand were entirely attributable to the motor vehicles and parts and the forestry products and building and packaging materials sectors. Shifts in demand for the other sector actually supported Canada's market share over the period examined (**Chart 6**). Lastly, the interaction term, while negligible for motor vehicles and parts and forestry products and building and packaging materials (-0.1 percentage point), contributed quite negatively to the total market share for the other sector (-1.1 percentage points), reflecting the fact that Canadian firms were losing market share in categories with rising U.S. import demand.

Chart 5: Cumulative change by sector due to shifts in product-specific market shares

Percentage points, annual data

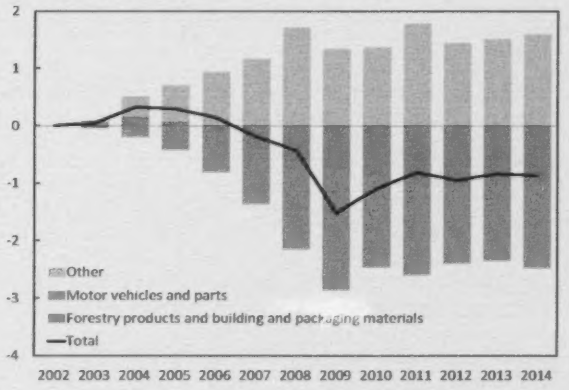


Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

Chart 6: Cumulative change by sector due to shifts in U.S. demand

Percentage points, annual data



Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

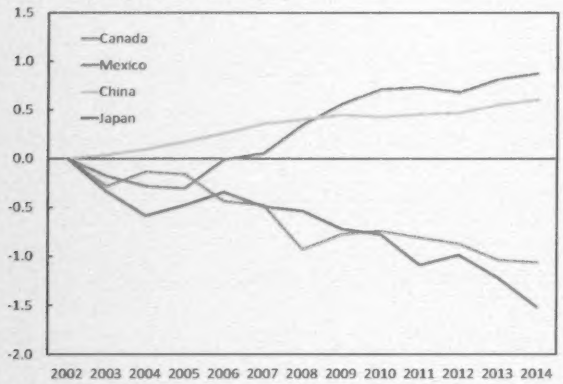
Sources: United Nations Comtrade and authors' calculations

(i) Motor vehicles and parts

Motor vehicles and parts accounted for nearly half of the total change in Canada's market share of U.S. non-energy imports since 2002. Canada's losses associated with motor vehicles and parts have reflected both competitiveness and demand factors (**Chart 7** and **Chart 8**). Compared with the losses of the other main U.S. trading partners, Japan's losses caused by motor vehicles and parts are very similar to those of Canada, while Mexico and China actually saw this sector support their aggregate market shares. However, underlying these trends, there have been divergences between motor vehicle exports and parts exports.

Chart 7: Cumulative change in motor vehicles and parts due to shifts in product-specific market shares

Percentage points, annual data

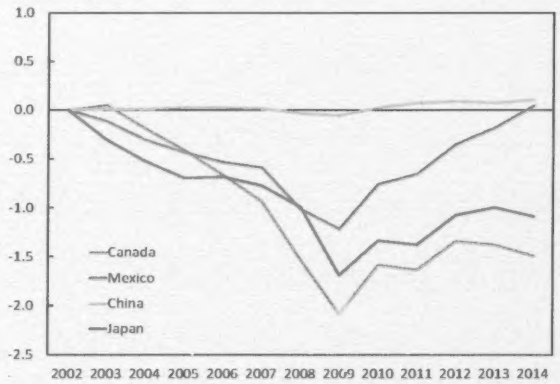


Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

Chart 8: Cumulative change in motor vehicles and parts due to shifts in U.S. demand

Percentage points, annual data



Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

From 2002 to 2009, U.S. imports of motor vehicles grew more slowly than total imports. Given their status as motor vehicle exporters, Canada, Mexico and Japan saw their market shares negatively affected by U.S. import demand, though to varying degrees (**Table 5**). Since 2009, demand has rebounded somewhat, with Mexico benefiting most during the post-crisis period, although Canada and Japan have also made gains.

Table 5: Contribution of motor vehicles to total change in non-energy import market shares (percentage points)

	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
Canada	-1.9	-0.4	-1.4	-0.1
Mexico	0.3	0.4	-0.1	0.0
China	0.0	0.0	0.0	0.0
Japan	-1.8	-0.9	-1.1	0.2

Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Motor vehicle parts have had a larger negative impact on Canada's market share in the United States since 2002 than that of any other country examined (**Table 6**). Shifts in U.S. import demand for parts did not play a large role; changes in product-specific market share accounted for most of the overall gains and losses. Only Canada and Japan had losses, while China and Mexico had the largest gains. U.S. import demand negatively impacted Canada and Mexico during the crisis, but has since rebounded.

Table 6: Contribution of motor vehicle parts to total change in non-energy import market shares (percentage points)

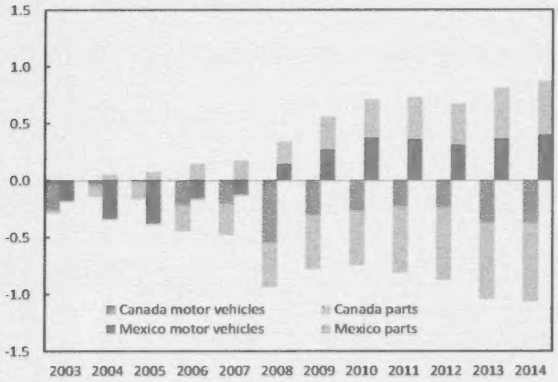
	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
Canada	-0.7	-0.7	-0.1	0.1
Mexico	0.5	0.5	0.1	-0.1
China	0.7	0.6	0.1	0.0
Japan	-0.5	-0.6	0.1	0.0

Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

The contrasting impact of motor vehicles and parts on the market shares of Canada and Mexico is particularly interesting given the integrated nature of the North American motor vehicle market. Mexico has gained competitiveness in both motor vehicles and parts fairly steadily since 2008, while Canada has been losing competitiveness, especially in parts (**Chart 9**).[11] This loss in market share of motor vehicle parts likely reflects, to some extent, firms moving their production capacity to Mexico.[12] Moreover, although Canada and Mexico's market shares of motor vehicles and parts were similarly negatively affected by demand between 2002 and 2009, Mexico's shares have rebounded to a greater degree following the crisis (**Chart 10**).

Chart 9: Cumulative change in motor vehicles and parts due to shifts in product-specific market shares

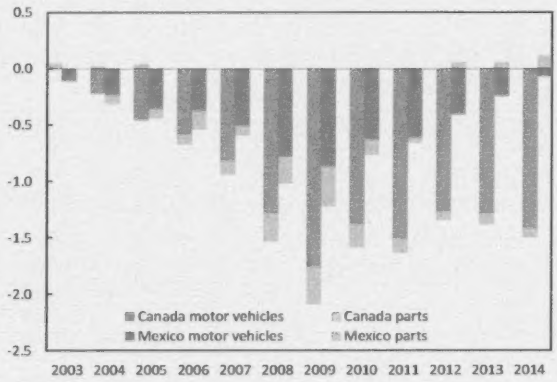
Percentage points, annual data



Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.
Sources: United Nations Comtrade and authors' calculations

Chart 10: Cumulative change in motor vehicles and parts due to shifts in U.S. demand

Percentage points, annual data



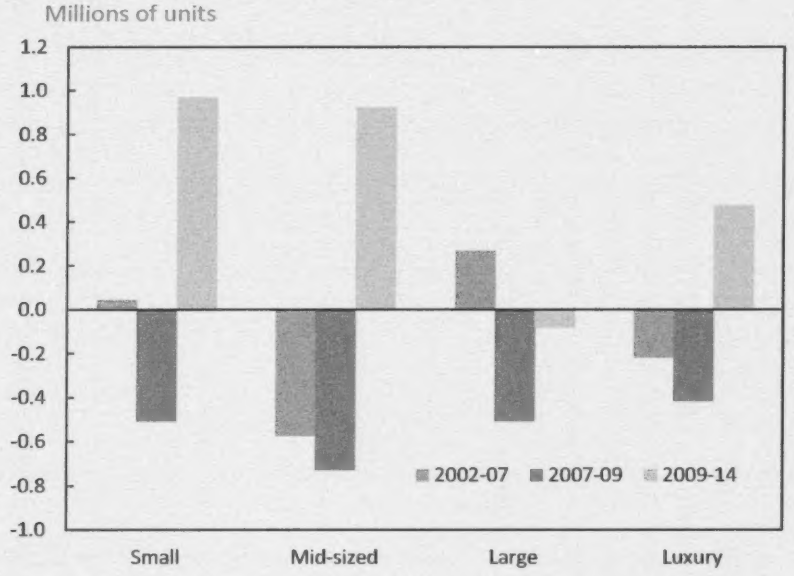
Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.
Sources: United Nations Comtrade and authors' calculations

[11] State-level import data are available, but only from 2008. Because of the limited sample, we choose to exclude these data from our main analysis. Nevertheless, these data reveal that since 2008, 85 per cent of Canada's loss in market share of motor vehicles, and 60 per cent of Mexico's gains, can be accounted for by import activity in Michigan.

[12] See Coiteux et al. (2014) for more details.

A more detailed analysis reveals that much of the movement attributable to the shift in the composition of U.S. import demand during and following the crisis is accounted for by diverging trends in U.S. sales of small and large cars. Indeed, a large portion of this loss is due to a shift away from the large cars produced in Canada. More specifically, during the crisis, U.S. sales of all car types declined significantly, but sales rebounded in all segments except large cars in the post-crisis period (**Chart 11**).

Chart 11: Change in U.S. car sales by type



Sources: WardsAuto and authors' calculations

The reduction in U.S. demand for large cars disproportionately affected Canada since it is the largest producer of large cars in North America, accounting for approximately 75 per cent of production, on average, since 2002. In fact, a decline in the production of large cars has accounted for almost all of the reduction in Canadian light vehicle production since 2007, with the proportion of large cars in Canadian motor vehicle production falling from 28 per cent in 2007 to 12 per cent by 2014 (**Table 7**). In contrast, since Mexico does not produce any large cars, it saw its import demand for motor vehicles bounce back by a larger amount in response to the rebound in sales of all other car types.

Table 7: Distribution of motor vehicle production by country (per cent)

	Canada			Mexico			United States		
	2002	2007	2014	2002	2007	2014	2002	2007	2014
Small cars	12.8	18.3	18.5	51.3	45.0	47.5	11.7	10.2	11.1
Medium cars	14.1	6.0	6.9	1.8	10.9	8.3	22.7	20.9	21.3
Large cars	23.3	27.6	11.9	0.0	0.0	0.0	1.5	2.3	0.8
Luxury cars	1.8	0.1	0.9	0.1	1.7	1.2	4.5	2.6	3.2
Light trucks	46.7	46.5	61.3	43.8	38.1	38.0	57.5	61.4	61.1
Medium and heavy trucks	1.3	1.4	0.5	3.0	4.2	5.1	2.1	2.6	2.5
Total	100	100	100	100	100	100	100	100	100

Sources: WardsAuto and Bank of Canada calculations

(ii) Forestry products and building and packaging materials

Forestry products are made up of two categories: pulp and paper stock; and logs, pulpwood and other forestry products. Since the latter is a very small component of forestry exports, representing only 0.04 per cent of Canada's non-energy exports, it is omitted from the discussion in this paper. Building and packaging materials, in contrast, represent a large share of Canadian exports and include a heterogeneous set of products, including lumber and other sawmill products, asphalt and asphalt products, plastic and foam building and construction materials, wood containers and pallets, steel pails and boxes, and many other products.

(a) Pulp and paper stock

Changes in market share attributable to pulp and paper is exclusively a Canadian phenomenon in our analysis (**Table 8**). The market share loss primarily reflects unfavourable shifts in U.S. demand, with losses in competitiveness playing a much less important role. For the remaining countries examined, pulp and paper did not impact their total U.S. market shares, reflecting the small size of this category in their respective exports.

Table 8: Contribution of pulp and paper to total change in the shares of the non-energy import market (percentage points)

	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
Canada	-0.6	-0.1	-0.5	0.0
Mexico	0.0	0.0	0.0	0.0
China	0.0	0.0	0.0	0.0
Japan	0.0	0.0	0.0	0.0

Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

(b) Building and packaging materials

In contrast to that of pulp and paper stock, meaningful shifts in total market shares attributable to building and packaging materials have affected both Canada and China over the period examined (**Table 9**).

Table 9: Contribution of building and packaging materials to total change in the shares of the non-energy import market (percentage points)

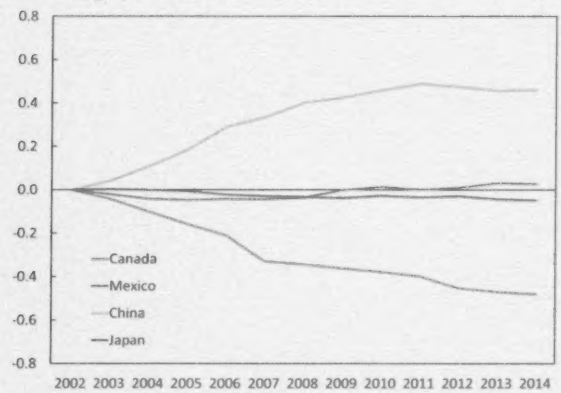
	Total change in market share	Change in product-specific market share	Change in composition of U.S. import demand	Interaction
Canada	-0.8	-0.5	-0.5	0.2
Mexico	0.0	0.0	0.0	0.0
China	0.5	0.5	-0.1	0.1
Japan	0.0	0.0	0.0	0.0

Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Overall, building and packaging materials subtracted almost a full percentage point off Canada's share of the U.S. non-energy import market, which was evenly split between unfavourable shifts in demand and declines in product-specific market shares (**Chart 12** and **Chart 13**). In contrast, China's gains due to building and packaging materials were entirely related to competitiveness, with demand shifts actually pulling down its total market share, although offset by the interaction between these two factors.

Chart 12: Cumulative change in building and packaging materials due to shifts in product-specific market shares

Percentage points, annual data

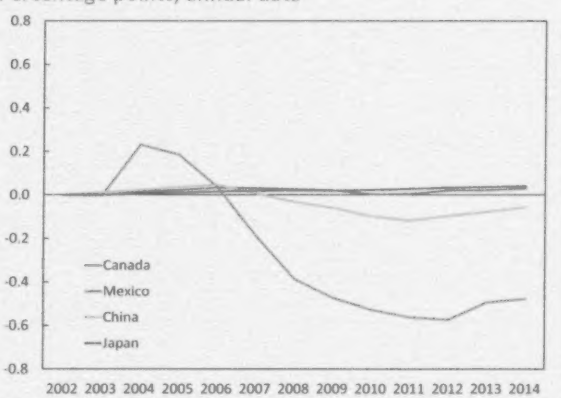


Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

Chart 13: Cumulative change in building and packaging materials due to shifts in U.S. demand

Percentage points, annual data

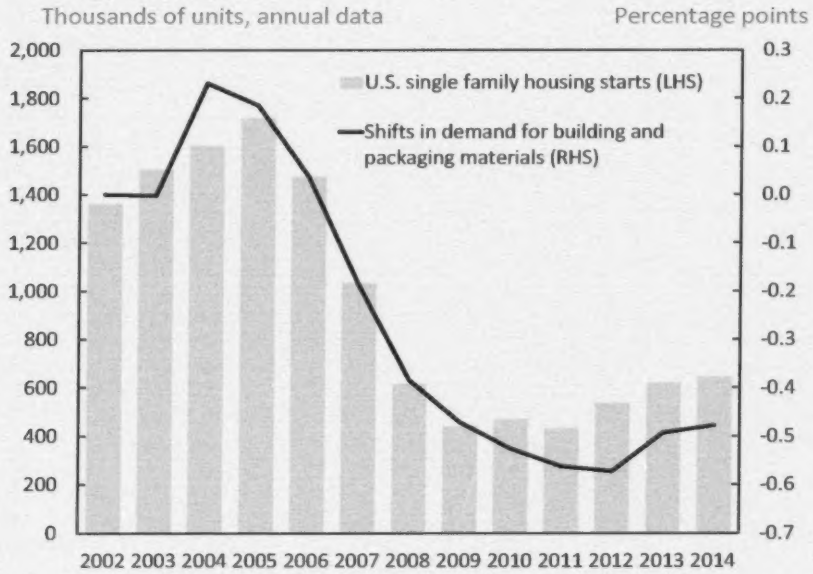


Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

It is interesting to note that, for Canada, the losses due to unfavourable shifts in demand for building and packaging materials appear to be related to the collapse of the U.S. housing market. Indeed, since 2002, Canada's loss of market share related to building and packaging materials and specifically related to demand factors have closely followed movements in U.S. single family housing starts (**Chart 14**).

Chart 14: Cumulative change in demand for building and packaging materials and U.S. single family housing starts



Sources: U.S. Census Bureau, United Nations Comtrade and authors' calculations

IV. Potential Implications for Canadian Non-Energy Exports

Using shift-share analysis to decompose changes in market share can be informative about the prospects for Canadian non-energy exports and how they might evolve relative to the Bank's foreign activity measure. Applying this analysis to Canadian exports may give us a more nuanced view of how competitiveness has evolved in the categories that have been identified as likely to lead the recovery.[13]

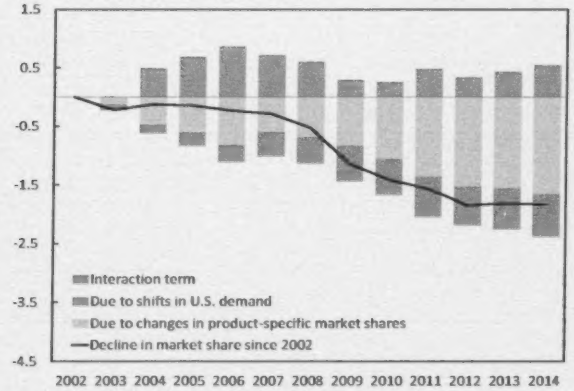
Interestingly, for the categories likely to lead the recovery, the composition of demand has supported Canada's market share since 2002, while it has worked in the opposite direction for those categories that are unlikely to lead the recovery (**Chart 15** and **Chart 16**). However, the loss

[13] Categories expected to lead the recovery were identified as those likely to benefit from exchange rate depreciation and/or with strong links to the expected drivers of foreign demand, as well as from intelligence gathered from Canadian firms. Table A5 includes the classification. See Binette, de Munnik and Gouin-Bonenfent (2014) for more details.

of product-specific market share has been fairly steady and similar for both those that are likely and those that are unlikely to lead the recovery, even in the post-crisis period.

Chart 15: Cumulative change in categories likely to lead the recovery

Percentage points, annual data

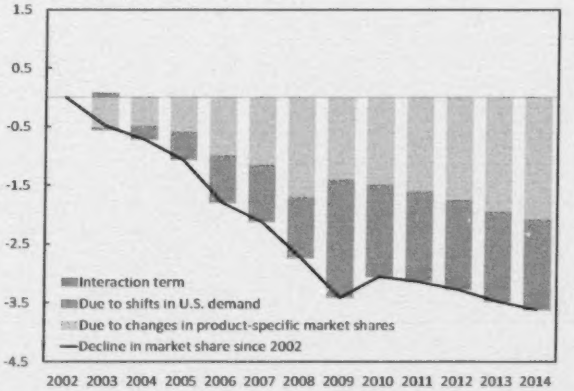


Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculation

Chart 16: Cumulative change in categories unlikely to lead the recovery

Percentage points, annual data



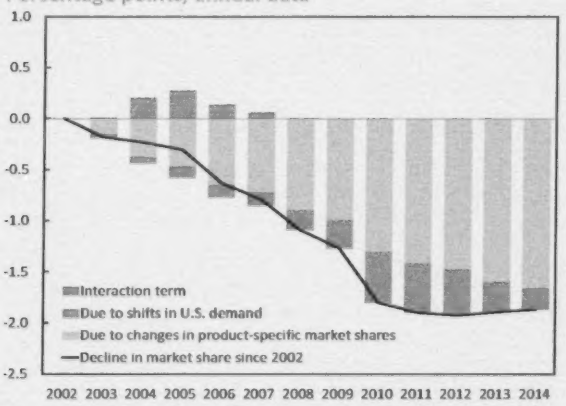
Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

We further divide the categories likely to lead the recovery into those that are sensitive to the exchange rate and those that are not. We find that all losses in the product-specific market share for the categories likely to lead the recovery can be accounted for by those sensitive to the exchange rate (**Chart 17**). This is especially true in the crisis and post-crisis periods. Perhaps most notably, categories likely to lead the recovery and insensitive to the exchange rate have supported Canada's market share since 2002 (**Chart 18**), primarily reflecting gains made in intermediate metal products.

Chart 17: Cumulative change in categories likely to lead the recovery that are exchange rate sensitive

Percentage points, annual data

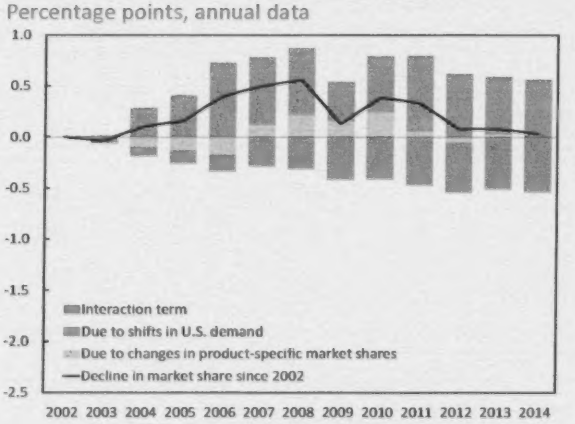


Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

Chart 18: Cumulative change in categories likely to lead the recovery that are not exchange rate sensitive

Percentage points, annual data



Note: Cumulative changes are presented as contributions to the change in total non-energy import market share.

Sources: United Nations Comtrade and authors' calculations

V. Conclusion

In this paper, we examine the evolution of country-specific market shares of U.S. non-energy imports. We use shift-share analysis to decompose movements in the aggregate market shares into those related to actual shifts in product-specific market shares, those related to shifts in the composition of U.S. import demand and the interaction between these two effects. Separating market shares using this approach can lead to different conclusions regarding relative competitiveness, particularly over shorter time periods. Specifically, we find that two-thirds of Canada's 5.6-percentage-point decline in its share of the U.S. non-energy import market between 2002 and 2014 is attributable to competitiveness. Moreover, we find that losses associated with a shift in the composition of U.S. import demand can occur abruptly, as demonstrated by the declines observed during the crisis. Compared with those of the other major U.S. trading partners, Japan's loss in U.S. market share was similar to Canada's over the period examined. In contrast, China and Mexico both gained market share between 2002 and 2014. China gained mostly in product-specific market share, while Mexico benefited from favourable shifts in U.S. import demand.

Our sectoral decomposition shows that almost three-quarters of Canada's total loss in market share was concentrated in two sectors: (i) motor vehicles and parts, and (ii) forestry products and building and packaging materials. While shifts in product-specific market share negatively affected the majority of sectors, these two sectors were most negatively affected by a shift in U.S. import demand. For motor vehicles, our analysis suggests that the shift in U.S. import demand primarily reflected a reduction in U.S. demand for large cars, which disproportionately affected Canadian exports. The reduction in U.S. import demand for Canadian building and packaging materials appears to be tied to the collapse in the U.S. housing market, particularly for single family homes.

Finally, a detailed decomposition of products expected to lead the recovery suggests that they should continue to be supported by improvements in U.S. demand. The recent depreciation of the Canadian dollar should further support Canada's market share by limiting losses in market share associated with those export categories identified as exchange rate sensitive. Together, these forces should support the rotation of demand in Canada toward exports and investment.

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Appendix

Table A1: Contributions to the change in Canada's share of the U.S. non-energy import market from 2002 to 2014, by export category

	Change in product-specific market share	Change in composition of U.S. import demand	Interaction	Total change in market share
Motor vehicles	-0.37	-1.42	-0.10	-1.89
Building and packaging materials	-0.48	-0.48	0.17	-0.79
Tires, motor vehicle engines and motor vehicle parts	-0.69	-0.07	0.06	-0.71
Pulp and paper stock	-0.07	-0.48	0.00	-0.55
Other electronic and electrical machinery, equipment and parts	-0.33	0.03	-0.04	-0.34
Clothing, footwear and textile products	-0.20	-0.04	-0.01	-0.25
Industrial machinery, equipment and parts	-0.19	0.23	-0.27	-0.23
Furniture and fixtures	-0.20	-0.01	0.00	-0.22
Paper and published products	-0.14	-0.10	0.03	-0.20
Communications and audio and video equipment	-0.32	0.16	-0.02	-0.18
Aircraft, aircraft engines and aircraft parts	0.00	-0.15	0.00	-0.15
Cleaning products, appliances, and miscellaneous goods and supplies	-0.13	0.03	-0.01	-0.12
Fabricated metal products	-0.13	0.02	-0.01	-0.11
Food, beverage and tobacco products	-0.17	0.07	-0.01	-0.11
Plastic and rubber products	-0.17	0.07	0.00	-0.10
Non-metallic mineral products	-0.05	-0.01	0.00	-0.07
Other transportation equipment and parts	0.00	-0.02	-0.04	-0.06
Logs, pulpwood and other forestry products	0.00	-0.02	0.00	-0.02
Computers and computer peripheral equipment	0.00	0.00	-0.02	-0.01
Metal ores and concentrates	0.01	-0.01	0.00	0.00
Farm and fishing products	-0.09	0.07	0.04	0.03
Non-metallic minerals	0.03	0.10	-0.07	0.06
Recyclable waste and scrap	0.03	0.07	-0.03	0.06
Intermediate metal products	0.00	0.58	-0.51	0.07
Basic chemicals and industrial chemical products	-0.05	0.25	-0.13	0.08
Pharmaceutical and medicinal products	0.01	0.10	-0.01	0.11
Food and tobacco intermediate products	0.00	0.14	-0.02	0.12
Total	**-3.71**	**-0.87**	**-1.00**	**-5.58**

Note: All figures are presented as contributions to the change in total non-energy import market share.
Sources: United Nations Comtrade and authors' calculations

Table A2: Contributions to the change in Mexico's share of the U.S. non-energy import market from 2002 to 2014, by export category

	Change in product-specific market share	Change in composition of U.S. import demand	Interaction	Total change in market share
Motor vehicles	0.40	-0.07	0.01	0.34
Building and packaging materials	0.03	0.03	-0.02	0.04
Tires, motor vehicle engines and motor vehicle parts	0.48	0.11	-0.05	0.54
Pulp and paper stock	0.00	0.00	0.00	0.00
Other electronic and electrical machinery, equipment and parts	-0.46	0.00	0.16	-0.29
Clothing, footwear and textile products	-0.51	-0.14	0.01	-0.65
Industrial machinery, equipment and parts	0.17	0.16	0.07	0.40
Furniture and fixtures	-0.03	0.06	0.01	0.04
Paper and published products	0.03	-0.03	-0.01	-0.01
Communications and audio and video equipment	-0.40	0.55	0.16	0.32
Aircraft, aircraft engines and aircraft parts	0.04	0.01	0.00	0.06
Cleaning products, appliances, and miscellaneous goods and supplies	-0.07	0.14	0.03	0.10
Fabricated metal products	-0.02	0.00	0.01	-0.01
Food, beverage and tobacco products	0.11	0.05	0.01	0.17
Plastic and rubber products	0.02	0.02	0.00	0.05
Non-metallic mineral products	0.01	-0.03	0.00	-0.02
Other transportation equipment and parts	0.02	0.00	0.01	0.02
Logs, pulpwood and other forestry products	0.00	0.00	0.00	0.00
Computers and computer peripheral equipment	-0.16	0.09	0.11	0.03
Metal ores and concentrates	0.00	0.00	0.00	0.00
Farm and fishing products	0.10	0.20	-0.06	0.23
Non-metallic minerals	0.00	0.00	0.01	0.00
Recyclable waste and scrap	0.02	0.03	-0.02	0.04
Intermediate metal products	0.06	0.27	-0.06	0.28
Basic chemicals and industrial chemical products	-0.01	0.04	-0.02	0.01
Pharmaceutical and medicinal products	0.00	0.01	-0.01	0.00
Food and tobacco intermediate products	0.01	0.02	0.00	0.04
Total	**-0.17**	**1.53**	**0.36**	**1.71**

Note: All figures are presented as contributions to the change in total non-energy import market share.
Sources: United Nations Comtrade and authors' calculations

Table A3: Contributions to the change in China's share of the U.S. non-energy import market from 2002 to 2014, by export category

	Change in product-specific market share	Change in composition of U.S. import demand	Interaction	Total change in market share
Motor vehicles	0.02	0.00	0.01	0.04
Building and packaging materials	0.46	-0.06	0.11	0.52
Tires, motor vehicle engines and motor vehicle parts	0.58	0.10	0.01	0.69
Pulp and paper stock	0.01	-0.02	0.02	0.01
Other electronic and electrical machinery, equipment and parts	1.69	-0.57	-0.05	1.06
Clothing, footwear and textile products	1.64	-0.71	0.09	1.03
Industrial machinery, equipment and parts	0.79	-0.50	0.77	1.06
Furniture and fixtures	0.25	-0.03	0.01	0.23
Paper and published products	0.20	-0.04	0.00	0.16
Communications and audio and video equipment	2.35	0.24	0.73	3.32
Aircraft, aircraft engines and aircraft parts	0.02	0.01	0.00	0.03
Cleaning products, appliances, and miscellaneous goods and supplies	0.56	-0.76	0.34	0.14
Fabricated metal products	0.24	-0.01	0.00	0.23
Food, beverage and tobacco products	0.07	0.05	0.02	0.14
Plastic and rubber products	0.17	0.04	0.02	0.23
Non-metallic mineral products	0.18	-0.10	0.00	0.08
Other transportation equipment and parts	0.06	-0.01	-0.02	0.03
Logs, pulpwood and other forestry products	0.00	0.00	0.00	0.00
Computers and computer peripheral equipment	2.15	-0.04	0.04	2.14
Metal ores and concentrates	0.00	0.00	0.00	0.00
Farm and fishing products	0.00	0.03	-0.01	0.02
Non-metallic minerals	-0.01	0.01	0.00	0.00
Recyclable waste and scrap	0.00	0.00	0.00	0.00
Intermediate metal products	0.02	-0.04	0.26	0.23
Basic chemicals and industrial chemical products	0.38	-0.03	0.01	0.36
Pharmaceutical and medicinal products	0.08	0.00	-0.01	0.07
Food and tobacco intermediate products	0.00	0.01	0.00	0.01
Total	**11.90**	**-2.41**	**2.34**	**11.83**

Note: All figures are presented as contributions to the change in total non-energy import market share.
Sources: United Nations Comtrade and authors' calculations

Table A4: Contributions to the change in Japan's share of the U.S. non-energy import market from 2002 to 2014, by export category

	Change in product-specific market share	Change in composition of U.S. import demand	Interaction	Total change in market share
Motor vehicles	-0.88	-1.15	0.21	-1.81
Building and packaging materials	-0.05	0.04	0.00	-0.01
Tires, motor vehicle engines and motor vehicle parts	-0.64	0.06	0.04	-0.55
Pulp and paper stock	0.00	-0.01	0.00	-0.01
Other electronic and electrical machinery, equipment and parts	-0.63	-0.18	0.04	-0.76
Clothing, footwear and textile products	-0.02	-0.01	0.00	-0.03
Industrial machinery, equipment and parts	-1.00	0.14	0.61	-0.26
Furniture and fixtures	0.00	0.00	0.00	0.00
Paper and published products	-0.04	-0.14	0.08	-0.10
Communications and audio and video equipment	-0.60	0.11	-0.04	-0.53
Aircraft, aircraft engines and aircraft parts	0.08	0.10	0.01	0.19
Cleaning products, appliances, and miscellaneous goods and supplies	-0.28	-0.07	0.05	-0.30
Fabricated metal products	-0.07	0.02	0.00	-0.05
Food, beverage and tobacco products	-0.01	0.01	0.00	0.00
Plastic and rubber products	-0.05	0.03	-0.01	-0.04
Non-metallic mineral products	-0.02	-0.01	0.00	-0.03
Other transportation equipment and parts	-0.10	-0.10	0.02	-0.18
Logs, pulpwood and other forestry products	0.00	0.00	0.00	0.00
Computers and computer peripheral equipment	-0.41	-0.05	0.02	-0.44
Metal ores and concentrates	0.00	0.00	0.00	0.00
Farm and fishing products	0.00	0.00	0.00	0.00
Non-metallic minerals	0.00	0.00	0.00	0.00
Recyclable waste and scrap	0.00	0.01	0.00	0.01
Intermediate metal products	0.05	0.13	-0.12	0.06
Basic chemicals and industrial chemical products	0.00	-0.04	-0.11	-0.15
Pharmaceutical and medicinal products	-0.18	0.14	-0.03	-0.08
Food and tobacco intermediate products	0.00	0.00	0.00	0.00
Total	**-4.86**	**-0.96**	**0.75**	**-5.07**

Note: All figures are presented as contributions to the change in total non-energy import market share.
Sources: United Nations Comtrade and authors' calculations

Table A5: Summary statistics of the 27 import categories examined, indicating those classified as likely to lead the recovery and those assessed as exchange rate sensitive

	Share of U.S. imports (per cent)	Share of U.S. imports from Canada (per cent)	Number of goods	Likely to lead the recovery	Exchange rate sensitive
Motor vehicles	9.48	20.67	28		x
Building and packaging materials	3.28	7.47	181	x	x
Tires, motor vehicle engines and motor vehicle parts	6.19	7.13	65		x
Pulp and paper stock	0.62	3.32	71		
Other electronic and electrical machinery, equipment and parts	8.21	2.89	270	x	x
Clothing, footwear and textile products	8.00	0.87	861		x
Industrial machinery, equipment and parts	8.73	6.76	554	x	x
Furniture and fixtures	2.52	1.64	30		x
Paper and published products	0.98	1.44	93		x
Communications and audio and video equipment	9.3	1.4	63	x	x
Aircraft, aircraft engines and aircraft parts	2.66	4.57	21	x	x
Cleaning products, appliances, and miscellaneous goods and supplies	8.68	2.04	414		x
Fabricated metal products	1.63	1.16	121	x	x
Food, beverage and tobacco products	4.28	6.51	401		
Plastic and rubber products	2.22	4.54	205	x	x
Non-metallic mineral products	1.08	0.58	154	x	x
Other transportation equipment and parts	0.47	0.54	53		x
Logs, pulpwood and other forestry products	0.01	0.04	8	x	
Computers and computer peripheral equipment	4.56	0.16	9	x	
Metal ores and concentrates	0.23	0.54	31		
Farm and fishing products	2.03	3.75	240		
Non-metallic minerals	0.33	1.63	64		
Recyclable waste and scrap	0.35	1.33	43		
Intermediate metal products	5.02	10.2	350	x	
Basic chemicals and industrial chemical products	4.33	4.88	639		
Pharmaceutical and medicinal products	4.16	2.14	94	x	x
Food and tobacco intermediate products	0.65	1.81	99		
Total	**100**	**100**	**5,162**	**41.92%**	**65.84%**

Table A6: Share of U.S. imports from each country of the 27 import categories examined (2014, in percentages)

	Share of U.S. imports from Canada	Share of U.S. imports from China	Share of U.S. imports from Mexico	Share of U.S. imports from Japan
Motor vehicles	20.67	0.17	18.23	26.72
Building and packaging materials	7.47	3.63	2.21	1.75
Tires, motor vehicle engines and motor vehicle parts	7.13	3.52	13.93	11.16
Pulp and paper stock	3.32	0.05	0.05	0.09
Other electronic and electrical machinery, equipment and parts	2.89	9.92	10.34	10.88
Clothing, footwear and textile products	0.87	14.89	2.40	0.40
Industrial machinery, equipment and parts	6.76	6.69	6.77	20.06
Furniture and fixtures	1.64	5.11	3.51	0.21
Paper and published products	1.44	1.38	0.63	1.01
Communications and audio and video equipment	1.40	19.00	12.74	3.15
Aircraft, aircraft engines and aircraft parts	4.57	0.17	0.62	5.12
Cleaning products, appliances, and miscellaneous goods and supplies	2.04	12.20	5.86	3.50
Fabricated metal products	1.16	1.98	1.40	1.78
Food, beverage and tobacco products	6.51	1.23	3.76	0.54
Plastic and rubber products	4.54	1.85	1.43	2.02
Non-metallic mineral products	0.58	1.48	1.02	0.72
Other transportation equipment and parts	0.54	0.54	0.24	1.05
Logs, pulpwood and other forestry products	0.04	0.00	0.00	0.00
Computers and computer peripheral equipment	0.16	12.22	5.10	0.99
Metal ores and concentrates	0.54	0.02	0.03	0.02
Farm and fishing products	3.75	0.18	4.02	0.04
Non-metallic minerals	1.63	0.04	0.13	0.01
Recyclable waste and scrap	1.33	0.03	0.42	0.16
Intermediate metal products	10.20	1.21	3.77	3.01
Basic chemicals and industrial chemical products	4.88	2.06	0.83	3.51
Pharmaceutical and medicinal products	2.14	0.41	0.12	2.08
Food and tobacco intermediate products	1.81	0.03	0.42	0.03
Total	**100**	**100**	**100**	**100**